

IN THE SPECIFICATION

Please amend the paragraph beginning at page 18, paragraph [0064], with the following rewritten paragraph:

[0064] A tester having a 4.2-liter closed chamber adjusted to 1% RH or less in which 5.0 l/min of dry air is fed is prepared. A test sheet is placed in the chamber and let to heat up so that water vapor generated may spread in the chamber. The humidity of the air discharged [[in]] from the chamber is measured with a hygrometer, from which the amount of water vapor generated per unit time after the start of heat generation is calculated according to equation (1) shown below. The cumulative amount of water vapor generated for a period of 10 minutes is obtained and converted to a value per unit area. In the following equations, e stands for water vapor pressure (Pa); es, a saturated water vapor pressure (Pa; according to JIS Z8806); T, temperature (°C; dry-bulb temperature); and s, sampling cycle (sec).

$$\text{Relative humidity } U (\% \text{ RH}) = (e/es) \times 100$$

$$\text{Absolute humidity } D (\text{g/m}^3) = (0.794 \times 10^{-2} \times e) / (1 + 0.00366T) = (0.794 \times 10^{-2} \times U \times es) / [100 \times (1 + 0.00366T)]$$

$$\text{Unit air volume } P (\text{liter}) = (2.1 \times s) / 60$$

$$\text{Amount of water vapor per unit time } A (\text{g}) = (P \times D) / 1000$$

...(1)

Please amend the paragraph beginning at page 33, paragraph [0118], with the following rewritten paragraph:

[0118] The proportion of the components other than the fibrous material in the heat generating sheet precursor 2 is calculated from the solids weight and composition of a raw

material composition and the dry weight of the heat generating sheet precursor according to formula:

$$b = (M_h/M_s) \times (100-a)$$

wherein

b: content of components other than fibrous material in heat generating sheet precursor

M_h: dry weight of heat generating sheet precursor

M_s: solids weight of raw material composition

a: percentage of fibrous material in solids content of raw material composition

Please amend the paragraph beginning at page 53, paragraph [0200], with the following rewritten paragraph:

[0200] The proportion of the oxidizable metal in the molded article 20 is preferably 10% to 95% by weight, more preferably 30% to 80% by weight. Where the proportion of the oxidizable metal is 10% by weight or more, the following advantages are offered. The resulting heat generating sheet [[21]] 2 sufficiently heats up to a degree feeling hot to the touch of fingers. Since the proportions of the fibrous material and a binding component hereinafter described, which constitute the molded sheet 2, are controlled, flexibility of the sheet can be maintained. Where the proportion is 95% by weight or less, the heat generating sheet [[21]] 2 has sufficient air permeability, so that the reaction takes place sufficiently in the inside of the sheet to sufficiently raise the temperature. The duration of heat generation is sufficient. a water vapor supply by the moisture retaining agent is secured. Fall-off of the oxidizable metal hardly occurs. The molded sheet contains certain proportions of the fibrous material and binding component hereinafter described, which make up the molded article 20, to secure mechanical strength characteristics such as flexural strength and tensile strength. The oxidizable metal content in the molded article 20 can be determined by determination of ash in accordance with JIS P8128. Vibrating sample magnetization measurement is useful in

the case of iron, of which the magnetization on applying an external magnetic field is made use of.

Please amend the paragraph beginning at page 54, paragraph [0202], with the following rewritten paragraph:

[0202] The proportion of the moisture retaining agent in the molded article 20 is preferably 0.5% to 60% by weight, more preferably 1% to 50% by weight. With a moisture retaining agent content of 0.5% by weight or more, the heat generating sheet 2 holds a requisite water content for sustaining the oxidation reaction of the moisture retaining agent for maintaining the temperature at or above the body temperature. Furthermore, the heat generating sheet has sufficient air permeability for oxygen supply to assure high heat generation efficiency. With the moisture retaining agent content being 60% by weight or less, the following advantages are offered. The heat generating sheet 2 has a controlled heat capacity for the amount of heat generated to show a sufficient temperature rise to a degree that feels warm to the touch. Fall-off of the ~~oxidizable metal~~ moisture retaining agent is suppressed. Sufficient amounts of the fibrous material and binding component hereinafter described, which constitute the molded article 20, are secured to provide sufficient mechanical strength such as flexural strength and tensile strength.

Please amend the paragraph beginning at page 55, paragraph [0204], with the following rewritten paragraph:

[0204] The fibrous material content in the molded article 20 is preferably 2% to 50% by weight, more preferably 5% to 40% by weight. With the fibrous material content of 2% by weight or more, fall-off of the oxidizable metal and the moisture retaining agent is sufficiently prevented, and the resulting molded article has sufficient strength. With the

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fibrous material content of 50% by weight or less, the heat generating molded article has controlled heat generation to show a sufficient temperature rise. Furthermore, ~~certain proportions of the oxidizable metal and the moisture retaining agent~~ heat capacity of in the heat generating sheet 2 are secured to develop sufficient heat generating performance as desired.

Please amend the paragraph beginning at page 55, paragraph [0206], with the following rewritten paragraph:

The molded article 20 preferably contains at least 50% by weight, more preferably 70% by weight or more, even more preferably 80% by weight or more, of components other than the fibrous material. When the content of the components other than the fibrous material is 50% by weight or more, the temperature of heat generation rises to or above the temperature that feels hot when touched with the fingers, and the like. The higher the content of the components other than the fibrous material, the more preferred. Nevertheless, the upper limit is preferably about 98% by weight for assuring strength necessary to maintain fabricability of the molded article [[2]] 20. The proportions of the components other than the fibrous material are determined in the same manner as described with respect to the warming device of the third embodiment.

Please amend the paragraph beginning at page 60, paragraph [0225], with the following rewritten paragraph:

[0225] As illustrated in Figs. 8, 9(a), and 9(b), the heat generating sheet 2 has a first molded article 20 containing an oxidizable metal, a moisture retaining agent, and a fibrous material and having many holes 200 and a second molded article [[20]] 21 containing an

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oxidizable metal, a moisture retaining agent, and a fibrous material and having no holes 200.

The molded article 21 is superposed on each side of the molded article [[21]] 20.

Please amend the paragraph beginning at page 68, paragraph [0238], with the following rewritten paragraph:

The proportion of the oxidizable metal in the molded articles 20 and 21 is preferably 10% to 95% by weight, more preferably 30% to 80% by weight. Where the proportion of the oxidizable metal is 10% by weight or more, the resulting heat generating sheet 21 sufficiently heats up to or above the temperature feeling hot to the touch of fingers and the like, and the molded articles 20 and 21 are flexible because of the controlled proportions of the fibrous material and a binding component hereinafter described, which constitute the molded articles 20 and 21. With the proportion being 95% by weight or less, the heat generating sheet [[21]] 2 has sufficient air permeability. As a result, the reaction takes place sufficiently in the inside of the sheet to sufficiently raise the temperature. The duration of heat generation is sufficient. a water vapor supply by the moisture retaining agent is secured. Fall-off of the oxidizable metal hardly occurs. Certain proportions of the fibrous material and a binding component (e.g., a flocculant), which make up the molded articles 20 and 21, are secured to assure sufficient mechanical strength such as flexural strength and tensile strength.

Please amend the paragraph beginning at page 6, paragraph [0240], with the following rewritten paragraph:

[0240] The proportion of the moisture retaining agent in the molded articles 20 and 21 is preferably 0.5% to 60% by weight, more preferably 1% to 50% by weight. With a moisture retaining agent content of 0.5% by weight or more, the heat generating sheet 2 holds

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a requisite water content for the oxidizable metal to sustain oxidation reaction for maintaining the temperature at or above the body temperature. Furthermore, the heat generating sheet has sufficient air permeability for oxygen supply to assure high heat generation efficiency. With the moisture retaining agent content being 60% by weight or less, the following advantages are offered. The heat generating sheet 2 has a controlled heat capacity for the amount of heat generated to show a sufficient temperature rise to a degree that feels warm. The ~~oxidizable metal moisture retaining agent~~ hardly falls off. Sufficient amounts of the fibrous material and binding component, which build up the molded articles 20 and 21, are secured to provide sufficient mechanical strength such as flexural strength and tensile strength.

Please amend the paragraph beginning at page 68, paragraph [0260], with the following rewritten paragraph:

[0260] As described, since the heat generating sheet 2 of the present embodiment is composed of the molded article 21 and the molded article 20 having a large number of holes 200 laminated on both sides of the molded article 21, it shows high heat generating performance for its small thickness. The many holes [[20]] 200 formed in the molded articles [[2]] 20 contribute to excellent flexibility.

Please amend the paragraph beginning at page 70, paragraph [0269], with the following rewritten paragraph:

[0269] The heat generating molded article 10 according to the forth embodiment (see Figs. 4, 5(a), and 5(b)) is obtained by embossing the heat generating sheet precursor from both sides thereof by passing the precursor between matched steel embossing rolls. In a modification, the precursor may be embossed from only one side thereof by passing the precursor between an engraved roll and a flat roll to give the heat generating molded article

10' shown in Fig. 10. In this modification, the level difference D10 between the projections and the depressions is preferably 0.3 to 5 mm, more preferably 0.5 to 4 mm. With such a level difference, when the heat generating sheet precursors are stacked one on top of another, they can be joined into a unitary sheet and prevented from sliding. The top 120 of each projection 12 (or the bottom [[110]] of each depression [[11]]) formed by embossing between the engraved roll and the flat roll preferably has an area of 0.01 to 100 mm², more preferably 0.1 to 25 mm², for the same reasons as stated with respect to the heat generating molded article 10. The number of the tops 120 of the projections 12 (or the bottom of each depression) in an area of 10 cm² of the heat generating molded article is preferably 1 to 10000, more preferably 10 to 8000, for the same reason as for the heat generating molded article 10.

Please amend the paragraph beginning at page 71, paragraph [0270], with the following rewritten paragraph:

[0270] The shape of the ~~depressions bottoms~~ and the tops formed on the heat generating sheet precursor by the embossing is not limited to the shape adopted in the foregoing embodiments and includes a rectangle, a polygon, a circle, an ellipse, and an elongated ellipse. The ~~depressions bottoms~~ and the tops are preferably flat but may be curved. Furthermore, the cross-sectional contour of the projections and the depressions is not limited and includes a trapezoid (as in the above-mentioned embodiments), a triangle, a rectangle, a semicircle, a semi-ellipse, a half elongated ellipse, and a bell shape.

Please amend the paragraph beginning at page 71, paragraph [0272], with the following rewritten paragraph:

[0272] The heat generating sheet 2 according to the fifth embodiment (see Figs. 6,

7(a), and 7(b)) is obtained by embossing the molded article of sheet form from both sides thereof by passing between matched steel embossing rolls. In a modification, the molded article may be embossed from only one side thereof by passing between an engraved roll and a flat roll to give the heat generating sheet 2' shown in Fig. 11. In this modification, the level difference $[[D]] \underline{D2}$ between the projections and the depressions is preferably 0.3 to 5 mm, more preferably 0.5 to 2 mm. With such a level difference, when the heat generating sheets are stacked one on top of another, they can be joined into a unitary sheet and prevented from sliding. The top 240 of each projection 24 (or the bottom 230 of each depression 23) formed by embossing between the engraved roll and the flat roll preferably has an area of 0.01 to 100 mm², more preferably 0.1 to 25 mm², for the same reasons as stated with respect to the heat generating sheet 2. The number of the tops 240 of the projections 24 (or the bottoms of the depressions) in an area of 100 cm² of the heat generating sheet is preferably 1 to 10000, more preferably 10 to 8000, for the same reason as for the heat generating sheet 2.